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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/762,767	01/20/2004	Henry Wurzburg	5707-06000	3110
7590	09/21/2005		EXAMINER	
Jeffrey C. Hood Meyertons, Hood, Kivlin, Kowert & Goetzel P.O. Box 398 Austin, TX 78767			LEE, SEUNG H	
			ART UNIT	PAPER NUMBER
			2876	

DATE MAILED: 09/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/762,767

Applicant(s)

WURZBURG ET AL.

Examiner

Seung H. Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-59 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9, 11-22, 24, 26-44, 46-53, 55 and 57-59 is/are rejected.
- 7) ☒ Claim(s) 10, 23, 25, 45, 54 and 56 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)                | Paper No(s)/Mail Date. ____   |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>1/2005, 12/2004</u>   | 6) <input type="checkbox"/> Other: ____                                     |

## **DETAILED ACTION**

### ***Claim Objections***

1. Claims 23, 34, 45, 54 are objected to because of the following informalities:

Re claim 23, 45, 54: Please substitute "...makes it appear..." with "... makes the device appear... --,

Re claim 33: Please delete second "computer" in line 2 of claim 34.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 6, 8, 11-14, 21, 26-28, 47, 52, 57-59 are rejected under 35 U.S.C. 102(b) as being anticipated by Howard et al. (US 6,460,143)(hereinafter referred to 'Howard')

Re claims 1, 14, 47: Howard teaches a computer system (100) comprising a computer (1020) such as a portable computer having a processor (108) connected to a host controller or USB host controller (114), a peripheral device (104) connected to the host controller via a USB bus (106), wherein the peripheral device is electronically disconnected from the host controller if the device is in an active state or shut down (see figs. 1 and 2; col. 4, line 60- col. 7, line 35),

Re claim 6: The activity at the device cause the USB host controller to be awakened in which serves as the device remains inactive when the device is electronically disconnected from the host controller (col. 5, lines 30-52),

Re claim 8: The processor (202) of computer system (200) is awakened if the electronically disconnect is discontinued by activity of the device for operating USB host controller (212) (see fig.2; col. 6, lines 39-59),

Re claims 11, 26, 57: The USB host controller (114) serves as a peripheral bus interface for peripheral device,

Re claims 12, 27, 58: The device is electronically disconnecting comprises a pull down resistor to ground pulls the USB D+ data line low wherein method servers as electronically removing a pull up resistor (col. 2, lines 16-43),

Re claim 13, 28, 59: The OR gate (322) receives inputs from the DV+ and DV- serving as tri-stating the DV+ and the DV- line (see fig. 3; col. 7, line 36- col. 9, line 13),

Re claim 21, 52: The awakening system by the wake circuit occurred when the bus event is detected wherein such detection including connection of the device, that is, the host controller does not create bus activity when the no devices are coupled to the host controller (claims 1 and 4),

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2, 3, 7, 15, 16, 22, 48, 49, 53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Howard in view of Chang (US 2004/0027879).

The teachings of Howard have been discussed above.

In addition to the teachings of Howard as discussed above, he also teaches that the resume event or connect event also activate the system such as a portable computer from an inactive mode or the sleep mode (claims 1 and 4), however, he fails to particularly teach the device is a card reader or a hub.

Chang teaches a flash card reader (13) comprises a insertion slots (111-114) operated by the controller (132) serving as a card reader, the reader also comprises a USB jacks (14) for receiving USB devices wherein the reader serving as a hub for receiving USB devices such as joystick or pen driver (see figs. 1-2; paragraphs 0011-00014):

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Chang to the teachings of Howard in order to provide user-friendly system for providing a plurality types of card slots for reading/writing information from the different card types such as a SM card type, a MMC card type, etc. moreover, such modification (i.e., the card reader having additional USB

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jacks) would expands usability of the USB technology by connecting USB compatible devices such as USB pointing pens or USB barcode reader, etc. furthermore, such modification (i.e., the electrical disconnect from the host controller is discontinued if inserting card into the card reader detected) would have been an obvious to one of ordinary skill in the art to realize that such inserting card into the card reader activate the system by means of connect event in order to access the inserted card therein.

6. Claims 4, 5, 19, 20, 24, 50, 51, 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Howard in view of Knight et al. (US 2003/0167345)(hereinafter referred to as 'Knight').

The teachings of Howard have been discussed above.

Although, Howard teaches the system for connecting the peripheral device such as the USB device with sleep mode capability, he fails to particularly teach the device will be in an inactive state if the device has not been used in a predetermined/specified time period or wait period.

Knight teaches a bridge system (200') comprising a DSP (224) for communicating with USB OTG (on-the-go) device wherein the USB OTG will enter wait mode, then enter the power saving mode if there is no communication is detected for a predetermined time period (see figs. 11-14; paragraphs 0192-0232).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Knight to the teachings of Howard in order to save power by entering the device into the sleep mode until it is necessary to

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operate the device by awakening the device or providing power to operate when it detects signals from the device or the processor of the computer initiate operation requiring use of the device.

7. Claims 29-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Howard in view of Chang and Cohen (US 6,928,562)(hereinafter referred to as 'Cohen').

Re claim 29, 31, 33-36: Howard teaches a computer system (100) comprising a computer (1020 such as a portable computer having a processor (108) connected to a host controller or USB host controller (114), a peripheral device (104) connected to the host controller via a USB bus (106), wherein the peripheral device is electronically disconnected from the host controller if the device is in an active state or shut down (see figs. 1 and 2; col. 4, line 60- col. 7, line 35).

However, Howard fails to particularly teach the device is a card reader or a hub, the hub is permanently coupled to a portable computer.

Chang teaches a flash card reader (13) comprises a insertion slots (111-114) operated by the controller (132) serving as a card reader, the reader also comprises a USB jacks (14) for receiving USB devices wherein the reader serving as a hub for receiving USB devices such as joystick or pen driver (see figs. 1-2; paragraphs 0011-00014).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Chang to the teachings of Howard in order to expands usability of the USB technology by connecting USB compatible

devices such as USB pointing pens or USB barcode reader, etc. Moreover, coupling the USB hub to the portable computer is well known in the art at the time the invention for utilizing the USB technologies.

However, Howard/Chang fails to particularly teach that a device detects logic.

Cohen teaches the USB hub (106) connected with the Attach/Removal detection logic (120) for determining of connection of the USB device with the USB hub (see figs, 1-4; Abstract; col. 2, line 46- col. 5, line 59).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Cohen to the teachings of Howard/Chang in order to provide an improved power management by disconnecting electronic by decoupling the USB device logically for conserving power usage.

Re claim 30: The awakening system of Howard by the wake circuit occurred when the bus event is detected wherein such detection including connection of the device, that is, the host controller does not create bus activity when the no devices are coupled to the host controller (claims 1 and 4),

Re claim 32: The processor (202) of computer system (200) is awakened if the electronically disconnect is discontinued by activity of the device for operating USB host controller (212) (see fig.2; col. 6, lines 39-59),

Re claim 37: The USB circuitry detects the full-speed or low-speed device wherein such device is subjected of the power-conserving device connected to the system (col 2,lines 34-43).

Re claim 38: The ROM (206) stores operation instruction.



8. Claim 39 is rejected under 35 U.S.C. 103(a) as being unpatentable over Howard as modified by Cohen as applied to claim 29 above, and further in view of Knight et al. (US 2003/0167345)(hereinafter referred to as 'Knight').

The teachings of Howard/Cohen have been discussed above.

Although, Howard/Cohen teaches the system for connecting the peripheral device such as the USB device with sleep mode capability, he fails to particularly teach the device will be in an inactive state if the device has not been used in a predetermined/specified time period or wait period.

Knight teaches a bridge system (200') comprising a DSP (224) for communicating with USB OTG (on-the-go) device wherein the USB OTG will enter wait mode, then enter the power saving mode if there is no communication is detected for a predetermined time period (see figs. 11-14; paragraphs 0192-0232).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Knight to the teachings of Howard/Cohen in order to save power by entering the device into the sleep mode until it is necessary to operate the device by awakening the device or providing power to operate when it detects signals from the device or the processor of the computer initiate operation requiring use of the device.

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9. Claims 40-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Howard in view of Chang.

Re claim 40-42: Howard teaches a computer system (100) comprising a computer (1020 such as a portable computer having a processor (108) connected to a host controller or USB host controller (114), a peripheral device (104) connected to the host controller via a USB bus (106), wherein the peripheral device is electronically disconnected from the host controller if the device is in an active state or shut down and the awakening the system by exiting sleep mode or inactive mode when bus events detect certain events such as connecting the device (see figs. 1 and 2; col. 4, line 60-col. 7, line 35),

However, Howard fails to particularly teach the device is a card reader or a hub.

Chang teaches a flash card reader (13) comprises a insertion slots (111-114) operated by the controller (132) serving as a card reader, the reader also comprises a USB jacks (14) for receiving USB devices wherein the reader serving as a hub for receiving USB devices such as joystick or pen driver (see figs. 1-2; paragraphs 0011-00014).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Chang to the teachings of Howard in order to provide user-friendly system for providing a plurality types of card slots for reading/writing information from the different card types such as a SM card type, a MMC card type, etc. moreover, such modification (i.e., the card reader having additional USB jacks) would expands usability of the USB technology by connecting USB compatible

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devices such as USB pointing pens or USB barcode reader, etc. furthermore, such modification (i.e., the electrical disconnect from the host controller is discontinued if inserting card into the card reader detected) would have been an obvious to one of ordinary skill in the art to realize that such inserting card into the card reader activate the system by means of connect event in order to access the inserted card therein.

Re claim 43: The USB circuitry detects the full-speed or low-speed device wherein such device is subjected of the power-conserving device connected to the system (col 2, lines 34-43),

Re claim 44: The ROM (206) stores operation instruction.

10. Claim 46 is rejected under 35 U.S.C. 103(a) as being unpatentable over Howard as modified by Chang as applied to claim 40 above, and further in view of Knight et al. (US 2003/0167345)(hereinafter referred to as 'Knight').

The teachings of Howard/Chang have been discussed above.

Although, Howard/Chang teaches the system for connecting the peripheral device such as the USB device with sleep mode capability, he fails to particularly teach the device will be in an inactive state if the device has not been used in a predetermined/specified time period or wait period.

Knight teaches a bridge system (200') comprising a DSP (224) for communicating with USB OTG (on-the-go) device wherein the USB OTG will enter wait mode, then enter the power saving mode if there is no communication is detected for a predetermined time period (see figs. 11-14; paragraphs 0192-0232).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Knight to the teachings of Howard/Chang in order to save power by entering the device into the sleep mode until it is necessary to operate the device by awakening the device or providing power to operate when it detects signals from the device or the processor of the computer initiate operation requiring use of the device.

***Allowable Subject Matter***

11. Claims 10, 17-18, 23, 25, 45, 54, and 56 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

12. The following is a statement of reasons for the indication of allowable subject matter:

The best prior arts of record fails to particularly teach that the system comprise a sideband signal wherein such sideband signal is used to signal the device to electronically reconnect after the device has been electronically disconnected and the device disconnected does not appear to the host controller if the device is not coupled to the host controller.

**Conclusion**


13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Nakaoka et al. (US 6,230,277) discloses a peripheral device for reducing power supplied from a host device.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Seung H. Lee whose telephone number is (571) 272-2401. The examiner can normally be reached on Monday-Friday, 7:30 AM- 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee can be reached on (571) 272-2398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Seung H Lee  
Art Unit 2876  
September 15, 2005